

Remarks

Claims 1-16 were pending in the present application prior to this response. Claims 1-14 were rejected. Claims 15 and 16 have been objected to. Claims 1, 5 and 6 have been amended herein. Claims 4, 8 and 10-11 are canceled. Reconsideration of all rejected claims is requested.

I. **Rejection of Claims 1-12 and 14 Under 35 U.S.C. §103(a)**

Claims 1-12 and 14 were rejected under 35 U.S.C. §103(a) as being unpatentable over Katoh (U.S. 5,796,430) in view of Kameshima (U.S. 6,271,880).

CLAIM 1

Claim 1 is independent and, as amended herein, is directed toward:

A digital imaging system comprising:

a photo detector, wherein dark current is outputable from said photo detector;

an analog-to-digital converter to convert the dark current output from the photo detector to at least one electric signal; and

a processor that measures the electric signal representative of the dark current and calculates the temperature of the photo detector based on the dark current measurement,

wherein the processor alters the performance of at least one heat generating component to control the temperature of the digital imaging system.

Some portions of claim 1 that are not disclosed by either Katoh, Kameshima, or their combination have been replicated above in bold type.

The applicants combined the elements of claim 4 (cancelled herein) into claim 1. The elements of claim 4 include the following element of claim 1:

wherein the processor alters the performance of at least one heat generating component to control the temperature of the digital imaging system.

The office action rejected claim 4 by way of a combination of Katoh and Kameshima. More specifically, the office action states that Kameshima discloses that a light source (8) of Figs. 13-15 is used to control the temperature of the imaging device disclosed in Kameshima. The applicants contend, contrary to the holding of the office action, that the light source (8) of Kameshima is used solely to illuminate a subject or an object being imaged. The applicants refer to column 9, lines 20-24 where the following description of the light source (8) is provided:

The control circuit 6 outputs the light-source control signal to the light source 8 to illuminate the subject for the period of T(Light). The charge according to the information light from the subject is accumulated in the photoelectric conversion element S1.

Accordingly, the light source is used to illuminate an object being imaged. The applicants have not found any disclosure in Kameshima related to using the light source or any other component to control the temperature of a digital imaging system as claimed in claim 1. Should this rejection be maintained, the applicants respectfully ask for clarification as to how this element of claim 1 is disclosed in Kameshima.

Based on the foregoing, the applicants contend that the rejection of claim 1 has been overcome. The applicants request reconsideration of the rejection.

CLAIMS 2 AND 3

Claims 2 and 3 are dependent on claim 1 and are deemed allowable by way of their dependence and for other reasons. Therefore, the applicants request reconsideration of the rejections.

CLAIM 5

Claim 5 is independent and, as amended herein, is directed toward:

A method for thermal control of a digital imaging system comprising:
measuring the dark current of a photo detector; and
calculating the temperature of the digital imaging system based on the measured dark current; and

controlling the temperature of at least one component in the digital imaging system based on the calculated temperature.

Some portions of claim 5 that are not disclosed by either Katoh, Kameshima, or their combination have been replicated above in bold type.

Claim 5 was rejected on many of the same grounds as claim 1. Accordingly, the applicants incorporate the rebuttals to the rejection of claim 1 into this rebuttal of the rejection of claim 5.

Claim 5 includes the following element, which the applicants contend is not disclosed by either Katoh, Kameshima, or their combination:

controlling the temperature of at least one component in the digital imaging system based on the calculated temperature.

The applicants refer to the rebuttal of the rejection of claim 1, where the applicants showed that Kameshima does not disclose controlling the temperature of any components in an imaging device based on the calculated temperature.

Based on the foregoing, the applicants contend that the rejection of claim 5 has been overcome. The applicants request reconsideration of the rejection.

CLAIMS 6, 7, AND 9

Claims 6, 7, and 9 are dependent on claim 5 and are deemed allowable by way of their dependence and for other reasons. Therefore, the applicants request reconsideration of the rejections.

CLAIM 12

Claim 12 is independent and is directed toward:

A method of operating a digital imaging device, said method comprising:

measuring a first dark current of at least one photo detector associated with said digital imaging device;

calculating the temperature of said at least one photo detector based on said first dark current; and

altering the performance of at least one device associated with said digital imaging device based on said temperature.

Some portions of claim 12 that are not disclosed by either Katoh, Kameshima, or their combination have been replicated above in bold type.

Claim 12 was rejected on many of the same grounds as claims 1 and 5. Accordingly, the applicants incorporate the rebuttals to the rejections of claims 1 and 5 into this rebuttal of the rejection of claim 12.

Claim 12 includes the following element, which the applicants contend is not disclosed by either Kato, Kameshima, or their combination:

altering the performance of at least one device associated with said digital imaging device based on said temperature.

The applicants refer to the rebuttal of the rejection of claim 1, where the applicants showed that Kameshima does not disclose altering the performance of any components in an imaging device based on the calculated temperature.

Based on the foregoing, the applicants contend that the rejection of claim 12 has been overcome. The applicants request reconsideration of the rejection.

CLAIMS 13 AND 14

Claims 13 and 14 are dependent on claim 12 and are deemed allowable by way of their dependence and for other reasons. Therefore, the applicants request reconsideration of the rejections.

II Objections to Claims 15 and 16

Claims 15 and 16 were objected to as being dependent on a rejected base claim. As set forth above, the applicants have overcome the rejection of the base claim (claim 12). Accordingly, the applicants contend that the objections have been overcome. The applicants request reconsideration of the objections.

In view of the above, all of the pending claims are now believed to be in condition for allowance and a notice to that effect is earnestly solicited.

Respectfully submitted,

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